



English Teachers' Experiences in Online Learning During the Covid-19 Pandemic at State Elementary School 005 Samarinda

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Abstract

The COVID-19 pandemic forced a rapid transition from face-to-face instruction to online learning across all school levels in Indonesia. For instance, one teacher at State Elementary School 005 Samarinda managed daily English lessons via a WhatsApp group - sending voice notes to explain vocabulary, relaying assignments through parents for students without smartphones, and staying online until late evening to answer students' questions. This study examines how English teachers at this school adapted to emergency remote teaching, focusing on their challenges, coping strategies, and professional development outcomes.

A qualitative phenomenological design was employed to capture teachers lived experiences. Semi structured interviews were conducted with three English teachers during the 2020/2021 academic year. Data were analyzed thematically to identify patterns of challenges, adaptation, and benefits Teachers reported significant obstacles, including limited digital literacy, unstable internet access, and reduced student engagement. Despite these barriers, the transition fostered professional development, particularly in digital competence and communication through platforms such as WhatsApp, Google Classroom, and Google Meet. The study concludes that while online learning disrupted established practices, it also acted as a catalyst for teacher resilience and technological growth. Continuous technical training and infrastructure support are recommended to strengthen preparedness for future blended learning environments. Previous studies have examined online learning broadly, but few focus on elementary English teachers in Samarinda. This research fills that gap by documenting localized experiences, offering insights into resilience and adaptation in resource-limited contexts.

Keywords: English Teachers; Online Learning; Covid-19 Pandemic; Elementary School; Teacher Experiences

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1. Introduction

The COVID-19 pandemic has profoundly transformed education worldwide, compelling teachers to adopt online learning modalities across all levels of schooling (Rasmitadila et al., 2020; Ratminingsih et al., 2022). In Indonesia, the Ministry of Education and Culture mandated home-based learning through Circular Letter No. 4 of 2020, requiring



teachers to transition rapidly from face-to-face instruction to digital platforms (Rasmitadila et al., 2020). Grounded in constructivist learning theory, this transformation highlights both systemic challenges and opportunities for professional growth (Alismaiel et al., 2022; Pratama et al., 2025; Sosibo, 2025).

Previous studies have documented diverse aspects of online learning. Indonesian research revealed limited digital literacy among teachers, unstable internet access, and reduced student engagement (Rahman, 2025). Other findings suggest that online learning fostered creativity in material design and enhanced technological competence (Nuraini et al., 2023; Suciati, 2020). However, most studies focus on secondary or general teacher populations, leaving elementary English teachers underexplored (Fauzi & Sastra Khusuma, 2020). Specifically, State Elementary School 005 Samarinda is a public primary school located in a semi-urban area of Samarinda, East Kalimantan, where internet infrastructure remains inconsistent and student device ownership varies significantly across households. The three English teachers at this school had no prior experience with online instruction, and the school lacked any formal digital learning policy before the pandemic. These contextual factors — infrastructural limitations, demographic heterogeneity, and institutional unpreparedness — distinguish this setting from better-resourced urban schools and from the secondary or tertiary contexts that dominate the existing literature. Crucially, however, most of these studies adopt descriptive or survey-based approaches that document patterns of difficulty without interrogating the assumptions underlying them — particularly the assumption that adaptation is a neutral, competence-based process — and very few examine what it actually feels like, at the level of lived professional experience, to be an elementary English teacher navigating these demands in a resource-limited school.

To date, no study has applied hermeneutic phenomenology to document the lived experiences of elementary English teachers in a resource-constrained urban school in East Kalimantan during the COVID-19 pandemic. Existing studies have either (a) focused predominantly on secondary or tertiary teachers; (b) relied on survey or questionnaire



instruments that limit access to lived experience; or (c) examined well-resourced urban settings that differ substantially from the context investigated here. Understanding how teachers in settings like SDN 005 Samarinda navigated this transition matters because their experiences reflect the conditions of the majority of Indonesian public primary schools — under-resourced, under-researched, and underrepresented in national policy discussions on digital education. The urgency of this inquiry is compounded by the fact that teachers at schools like SDN 005 Samarinda were left to improvise in near-complete institutional isolation during the critical early months of the pandemic — with no government-issued digital teaching protocols, no school-level online learning policy, and no prior training — a vacuum that had immediate consequences for the quality of English instruction received by their students.

This study challenges the assumption that online learning experiences are uniform across contexts. Crucially, no prior study has examined the phenomenological experiences of elementary English teachers in resource-limited urban schools in East Kalimantan, where infrastructural and demographic constraints compound the challenges of online instruction — a gap that the present study directly addresses. Its scientific contribution lies not only in providing localized evidence of teacher resilience and adaptation in resource-limited settings, but also in critically interrogating assumptions embedded in concepts such as 'adaptation' and 'readiness' — terms that, when left unexamined, may obscure the uneven burdens placed on different teacher groups. By reframing these concepts as contested rather than neutral descriptors of competence, the study makes an analytical contribution that extends beyond empirical documentation. The findings are expected to inform teacher training, policy development, and future blended learning practices.

The study is guided by two explicit research questions; 1) What challenges did English teachers at SDN 005 Samarinda face during the transition to online learning during the COVID-19 pandemic?; 2) How did these teachers adapt their practices, and 3) what professional benefits did they identify from the experience? These questions directly organize the three thematic findings presented in Section 3.



2. Method

2.1. Study Design

This study employed a qualitative research design using a hermeneutic phenomenological approach. Phenomenology was chosen to capture the lived experiences of English teachers adapting to online learning during the COVID-19 pandemic, focusing on how they interpreted and made meaning of their instructional practices. This design was appropriate because it emphasizes depth of understanding rather than generalization, aligning with the study's aim to explore contextualized teacher experiences.

Constructivist learning theory served not merely as a conceptual backdrop but as an active analytical lens throughout this study. In the coding process, participants' accounts were evaluated against core constructivist constructs — specifically meaning-making under novel conditions, active construction of professional knowledge in response to environmental constraints, and the social mediation of learning through peers, technology, and institutional structures. Findings are interpreted through the lens of how teachers, as active constructors of knowledge, negotiated the demands of digital instruction within the specific social and infrastructural conditions of their school context.

2.2. Researcher Positionality

Reflexivity is a cornerstone of hermeneutic phenomenological inquiry, and we acknowledge that our interpretive positions inevitably shaped the research process. The first author is a graduate student in English Education at the same faculty attended by the participant teachers. Interviews were conducted in Bahasa Indonesia to ensure natural, comfortable communication, and the first author's familiarity with the local school context facilitated trust and rapport with participants. The second and third authors, as academic supervisors, provided interpretive guidance during data analysis and served as a check on potential biases. Throughout the study, the research team actively bracketed personal assumptions — consciously setting aside prior expectations about online teaching to remain open to participants' own meanings. This reflexive stance is consistent with the principles of



hermeneutic phenomenology, which calls for recognition of the interpreter's situatedness within the research process. All interpretations were returned to participants through member checking to ensure accuracy and trustworthiness.

2.3. Sample Population

The participants were three English teachers from State Elementary School 005 Samarinda, each with more than five years of teaching experience and a bachelor's degree in English Education. They were purposively selected based on their direct involvement in online teaching during the pandemic and willingness to share insights. The small sample size is consistent with the conventions of phenomenological research: Creswell & Poth (2018) recommend between 3 and 10 participants for phenomenological inquiry, and thematic saturation was reached after the third interview, with no new meaning units emerging in the final session. The sample is thus justified on both methodological and empirical grounds.

It is acknowledged that purposive sampling based on willingness to participate may have introduced a self-selection bias toward teachers who were more open or digitally confident. To partially mitigate this, all three English teachers at the school were invited to participate — ensuring full population coverage within the site — and participants were explicitly encouraged during interview to share negative, difficult, or uncertain experiences, not only successes. This limitation is revisited in Section 5 (Limitations).

2.3. Data Collection Techniques and Instrument Development

Data were collected through semi-structured interviews, supported by field notes and transcripts. Data were collected through semi-structured interviews, supported by field notes and transcripts. The interview protocol comprised 12 open-ended questions organized into three thematic clusters: (a) challenges experienced during online teaching; (b) adaptive strategies developed in response; and (c) perceived outcomes and professional development benefits. Each interview lasted approximately 45–60 minutes and was conducted via online platforms (Zoom/WhatsApp). All interviews were audio-recorded with participants' explicit



written consent and transcribed verbatim by the first author. Field notes captured non-verbal cues, conversational pauses, emotional tone, and contextual observations recorded immediately after each session. Member-checked transcripts were returned to participants within one week for accuracy verification, and any corrections were incorporated before analysis.

All participants signed informed consent forms prior to interview, were assured of their right to withdraw at any time without consequence, and were guaranteed that all data would be anonymized in all reporting. Audio recordings were permanently deleted upon completion of verbatim transcription.

2.4. Data Analysis Techniques

Data analysis followed Sugiyono's (2011) framework. More specifically, the phenomenological reduction followed Moustakas's theory modified van Kaam method, proceeding through the following steps: (a) *epoche* — repeated reading of all transcripts while bracketing researcher assumptions to approach the data with openness; (b) *horizontalization* — identification of all significant statements (*horizons*) that describe the lived experience without imposing hierarchy; (c) *clustering* — grouping of horizon statements into thematic meaning units that capture invariant qualities of the experience; (d) *individual textural descriptions* — construction of narrative accounts of what each participant experienced, drawing directly on their words; and (e) *composite synthesis* — integration of textural descriptions into a unified account of the shared lived experience across participants. This layered process ensured that interpretations remained grounded in participant accounts at each stage.

Credibility was ensured through source triangulation (comparing responses across participants) and methodological triangulation (interviews, field notes, documents). Member checking was conducted by sharing summaries with participants for validation, while peer debriefing enhanced dependability.



3. Findings and Discussion

3.1. Findings

Table 1. Thematic Overview of Findings

Theme	Sub-Theme	Participant Codes	Representative Excerpt
Ease in Online Learning	Digital familiarity; RPP adaptation; Flexibility	P1/EXT/L.10; P2/EXT/L.10; P3/EXT/L.10	'I made a little modification to make the material easier to convey.' (P3)
Difficulties in Online Learning	Tech barriers; No prior experience; Platform challenges	P1/TPTO/L.2; P2/TPTO/L.2; P3/EXT/L.26	'I've never had online teaching experience before.' (P2)
Benefits of Online Learning	Digital growth; Flexibility; WhatsApp communication	P1/BDL/L.26; P2/BDL/L.26; P3/BDL/L.14	'The learning and teaching process can now be done anytime, anywhere.' (P2)

Note: Participant codes follow the format Participant/Theme Code/Line. All three research questions (RQ1 and RQ2) are addressed across these three themes.

3.1.1. The Ease Experienced by Teachers in Online Learning

The transition to an online learning system required teachers to adapt both instructional media and learning materials to enhance student comprehension. Participants 1 and 3 described their approach directly:

"I used the existing RPP, but I made a little modification to make the material easier to convey". (P3/EXT/L.10).

"It's almost the same as the conventional lesson plans that I usually make, but there are adjustments because the material must be delivered to students indirectly (online)". (P1/EXT/L.10).

These accounts indicate that both participants retained their existing lesson planning frameworks while making targeted modifications for the online context. This supports an interpretation of continuity-within-change: teachers did not abandon familiar structures but reconfigured them incrementally. However, the term 'ease' in this context requires critical



scrutiny. What teachers framed as comfortable adaptation was, in many cases, a pragmatic response to institutional pressure - an improvisation born of necessity rather than evidence of genuine digital readiness. The apparent smoothness of modifying RPP may reflect not confidence but a survival strategy that masked deeper professional anxieties. Reframing 'readiness' as a spectrum rather than a binary state allows us to appreciate that these teachers were neither wholly prepared nor wholly unprepared, but rather in continuous negotiation between their pedagogical identities and the unfamiliar demands of digital instruction.

Participant 2 demonstrated a higher degree of digital autonomy:

“From the lessons already available and then adjusted to the needs of online teaching, in some meetings, I prepared a video recording of me giving explanation about material, and then I gave assignments in the form of word, because I have an IT study background, so I made my own video by using some editing video application. The material is usually prepared 1-2 days before the lesson schedule is carried out”.
(P2/EXT/L.10)

This evidences the link between prior digital competence and the capacity for instructional innovation, supporting the constructivist principle that prior knowledge structures shape the



construction of new professional practice. Teachers also noted the flexibility afforded by online learning - the ability to teach 'anytime, anywhere' — as a concrete benefit.

3.1.2. The Difficulties Experienced by The Teachers During Online Learning

The transition to online instruction was reported as entirely novel for all three participants. Their shared inexperience is evidenced directly:

“Before the pandemic, we only underwent face-to-face teaching”. (P1/TPTO/L2)

“I’ve never had online teaching experience before. Usually, I only do face-to-face learning, and this COVID-19 pandemic is my first experience teaching online”. (P2/TPTO/L2)

“If we can understand the use of technology to teach online, it will greatly facilitate us to be able to teach face-to-face via online or just give assignments that we can check using our phones.” (P3/EXT/L.26)

Participant 1's account makes the rupture with established practice explicit. Participant 2's self-description establishes the empirical baseline for subsequent difficulties. Participant 3's conditional framing evidences that digital competence was perceived as the gatekeeping variable for instructional effectiveness. Taken together, these quotations ground the interpretation that difficulty was not rooted in content knowledge but in the unfamiliarity of the instructional medium itself.

Beyond the technical barriers, the emotional dimensions of this transition deserve closer examination. Implicit signals in participants' language — particularly Participant 1's use of the term 'overwhelming' when describing senior teachers' experiences — suggest that the pandemic did not merely create a skills gap; it surfaced an existential professional anxiety. Teachers who had built their identities around decades of face-to-face expertise suddenly found themselves repositioned as novices in a digitally mediated environment. This sense of deskilling, even if temporary, carries emotional weight that is rarely captured in survey-based studies of online learning challenges.

A further underexplored relational dimension is the role of parents as informal mediators between teachers and students. In the elementary school context, children — particularly those



in lower grades — were largely unable to navigate online platforms independently. Parents therefore became de facto instructional assistants: managing devices, supervising task completion, relaying teacher instructions, and communicating student difficulties back to teachers via WhatsApp. This parent-mediation layer profoundly shaped what instruction students actually received and added a significant communicative and emotional burden on teachers, who now had to manage relationships with parents as an informal but essential extension of their professional role.

When technical difficulties arose, teachers relied on school IT staff and younger colleagues:

“If the difficulties came from the media application that I used to teach, I asked our IT team at school or asked the younger teachers to help me solve the problem”. (P1/TPTO/L.18)

“For the material, there are actually no difficulties; it is enough to teach as usual. The school's IT team can help us deliver materials to students”. (P2/TPTO/L.18)

These accounts demonstrate that technical support networks functioned as mediating resources enabling instruction to continue despite individual competence gaps. Platforms such as Google Classroom and Google Meet introduced additional demands including screen-sharing, participant control, and management of unstable internet connections.

3.1.3. The Benefits of Online Learning for Teacher

Alongside the challenges, participants identified meaningful professional benefits:

“Actually, technology is very good and supports the lives and work of its users, but it depends on the individual. For young teachers who still have a high curiosity, this is a great opportunity to take advantage of technology as much as possible. But for us



seniors, it feels a little overwhelming. If there had been no pandemic, we might never have experienced teaching online". (P1/BDL/L.26)

"I've learned many things, especially in using technology. The learning and teaching process can now be done anytime, anywhere, and under any condition". (P2/BDL/L.26)

"If we understand how to use technology for online teaching, it can greatly help us deliver lessons virtually or even just assign tasks that we can check using our phones". (P3/BDL/L.26)

Participant 1's reflection acknowledges differential impact across experience levels while recognizing a development opportunity that would not otherwise have arisen. Participant 2's account provides evidence of new learning and temporal flexibility. Participant 3's conditional framing positions technology mastery as an enabler rather than a barrier — illustrating a perceptual shift grounded in experiential learning.

WhatsApp emerged as a key tool for teacher-student communication:

"I have a WhatsApp group for the class. Usually, after the scheduled lesson, I open a Q&A session where students can ask anything related to the lesson". (P1/BDL/L.14)

"I used WhatsApp groups to monitor students. They can ask questions about the lessons or their assignments in the group or through private chat". (P3/BDL/L.14)

Both quotations evidence the use of WhatsApp not merely as a messaging tool but as an extended instructional environment for reinforcement, clarification, and individualized support.

3.2. Discussion

3.2.1. The Ease Experienced by Teachers — Digital Literacy, Familiarity, and Flexibility

Our finding that several teachers at State Elementary School 005 Samarinda experienced relative ease in transitioning to online learning - largely due to their familiarity with RPP (lesson plans), willingness to adapt, and digital literacy - supports patterns observed in previous research. Studies show that teachers who possess digital competence or prior exposure to technology adjust more smoothly to online teaching demands (Khosiyono, 2022). Research on



Indonesian teachers' digital experiences during COVID-19 also confirms that educators' digital literacy significantly shaped their comfort levels and adaptability during the transition to online learning (Paramahita et al., 2023). These studies reinforce your observation that a teacher's existing pedagogical routines, combined with digital readiness, play a major role in reducing the burden of online instructional adjustments.

The teachers' efforts - such as modifying RPP, preparing video lessons, and uploading tasks in accessible digital formats - are consistent with documented trends across Indonesian schools, where the pandemic accelerated the adoption of digital tools without requiring teachers to discard their established pedagogical identities entirely (Khosiyono, 2022). This indicates that online teaching often evolved as an extension of existing classroom practices rather than a complete reinvention, supporting your finding that familiarity with lesson planning reduced teacher stress during the shift.

Flexibility also emerged as a major advantage, as teachers highlighted the ability to teach "anytime, anywhere." This aligns with findings showing that online learning enabled greater adaptability, personalized pacing, and expanded instructional opportunities beyond the classroom (Khosiyono, 2022). The increased use of asynchronous tools, such as videos and digital assignments, echoes broader research demonstrating that online settings encouraged innovative, flexible practices that teachers viewed positively (Paramahita et al., 2023). Together, these insights show that online learning offered meaningful professional growth opportunities for teachers who could leverage technology effectively.

3.2.2. The Difficulties Experienced - Technological Barriers, Lack of Preparedness, and Need for Support

Our finding that teachers struggled due to technological limitations, lack of online teaching experience, and difficulty using platforms such as Google Classroom and Google Meet is widely reflected in the literature. A large-scale study of 412 elementary teachers found that online lesson preparation - including modifying materials, designing digital worksheets, and



selecting appropriate media - was one of the most challenging aspects of remote instruction (Lediana & Ramadan, 2022). This mirrors your participants' struggles to adjust materials for online use despite being comfortable with face-to-face teaching.

Similarly, studies focusing on English teachers show that delivering language instruction online, particularly for productive skills such as speaking and writing, poses major pedagogical challenges due to limited interaction and technological barriers (Putri, 2021). Your participants' testimonies - expressing that this was their first online teaching experience - reflect a nationwide pattern in which teachers were unprepared for digital pedagogy and had to learn new skills abruptly during the pandemic (Oktaviani et al., 2021).

Our study also highlights teachers' reliance on school IT personnel or younger colleagues for technical assistance. This is consistent with research indicating that many Indonesian teachers lacked autonomy in navigating digital tools and depended heavily on external support systems (Oktaviani et al., 2021). Such reliance emphasizes the importance of institutional support, especially in public schools where infrastructure is often limited. These findings underscore that technological competence - not pedagogical knowledge - was the key determinant of teacher difficulty during online learning (Lediana & Ramadan, 2022).

Furthermore, difficulties with platforms such as Google Classroom and Google Meet are consistent with studies showing that many teachers struggled with uploading materials, organizing digital classes, and managing synchronous video sessions - especially when internet connectivity was unstable (Putri, 2021). These challenges highlight the broader digital divide in Indonesian education and stress the importance of school-based interventions and continuous professional development in digital pedagogy.

3.2.3. The Benefits of Online Learning for Teachers - Professional Growth, New Pedagogy, and Enhanced Communication

Your study found that online learning also brought several benefits, including improved digital literacy, increased innovation, and enhanced teacher-student communication. This aligns



with findings from Indonesian elementary school teachers who reported developing new teaching strategies, experimenting with multimedia tools, and becoming more confident in digital environments due to pandemic-driven necessity (Khosiyono, 2022). Research on digital transformation in primary schools similarly notes that the pandemic prompted long-overdue modernization of teaching practices, pushing educators to expand their technological skills (Muskania & Zulela MS, 2021). Research confirms that such mobile-based communication channels were essential for sustaining engagement - particularly in primary schools and low-resource contexts (Kariena et al., 2022).

However, it is important to resist overstating the transformative narrative. Mastering the operational mechanics of WhatsApp or Google Classroom is a skill acquisition, but it does not necessarily deepen teachers' understanding of English language pedagogy, differentiated instruction, or student-centered learning. The pandemic may have accelerated the quantity of digital exposure without necessarily deepening the quality of pedagogical practice. Future professional development programs must therefore move beyond technical training to address the pedagogical dimensions of digital instruction - ensuring that technology serves learning goals rather than substituting for them.

Drawing on these findings, we propose two conceptual contributions. First, the concept of 'constrained agency' captures the nature of teacher adaptation documented here: teachers adapted not from genuine empowerment but under conditions of institutional mandate, limited resources, and significant emotional cost. This differs from prior literature's framing of adaptation as a voluntary, growth-oriented process. Second, the informal support network of IT staff, younger colleagues, and parents constitutes what we term 'distributed digital scaffolding' — a form of community-level support that compensates for gaps in individual competence and institutional infrastructure, extending the digital pedagogy literature beyond its typical focus on individual teacher skills.



These findings collectively suggest that online learning, despite its challenges, enriched teachers' pedagogical repertoires, strengthened their communication practices, and expanded their technological confidence. This reinforces the idea that integrating technology in post-pandemic education could offer lasting benefits for teachers and students alike (Muskania & Zulela MS, 2021).

Several limitations of this study should be acknowledged. First, the scope of the study - a single school with three participants — constrains the transferability of findings to other schools, regions, or educational contexts. Second, data were collected at a specific phase of the pandemic (academic year 2020/2021), and teachers' experiences may have evolved substantially over time. Third, interviews were conducted in Bahasa Indonesia and subsequently translated, introducing the possibility of interpretive nuance being lost or altered in translation; this risk was partially mitigated through member checking and supervisor review. Fourth, as noted in Section 2.3, purposive sampling based on participant willingness may have introduced self-selection bias. Fifth, this study captures only the teacher perspective; the absence of student or parent voices means that the relational and instructional dimensions of online learning remain partially visible. Future research should incorporate multi-perspective designs to provide a more complete picture.

4. Conclusion

This study contributes to the digital pedagogy literature by critically examining - rather than merely documenting - how elementary English teachers navigated the transition to online learning during the COVID-19 pandemic. By interrogating assumptions embedded in concepts such as 'adaptation' and 'readiness,' and by foregrounding the roles of constrained agency and distributed digital scaffolding, the study offers a more analytically nuanced account of teacher experience in resource-limited contexts than has previously been available for this population.

The findings show that online learning during the COVID-19 pandemic created both significant challenges and new opportunities for teachers at State Elementary School 005 Samarinda. Limited digital skills, unstable internet connectivity, and difficulties maintaining



student engagement were common barriers. At the same time, teachers gained new competencies and recognized the long-term potential of digital tools for instruction. These insights emphasize the need for continuous digital training, improved infrastructure, and stronger institutional support to enhance future teaching and learning practices.

Based on these findings, we offer the following concrete, school-level recommendations. First, SDN 005 Samarinda should establish a structured, bi-annual technology training program tailored specifically to English language instruction — addressing not only platform operation but digital lesson design, student engagement strategies, and online assessment methods. Second, a formal peer mentoring system should be institutionalized, pairing digitally proficient younger teachers with senior colleagues in an ongoing capacity, with this mentoring role formally recognized and compensated. Third, school administrators should formally advocate to the local education authority for device lending programs and subsidized internet access for low-income students. Fourth, all teachers should be encouraged to maintain brief reflective teaching journals to document and process the emotional, relational, and professional dimensions of blended teaching. Together, these measures would strengthen the school's preparedness for future scenarios requiring remote instruction and support the gradual integration of blended learning as a permanent feature of quality primary education.

DECLARATION OF GENERATIVE AI

During the preparation of this manuscript, the authors used AI-assisted tools, including ChatGPT, Grammarly, and QuillBot, to support language editing and improve grammatical accuracy. The authors carefully reviewed and edited the output generated by these tools and take full responsibility for the content of the manuscript



5. References

- Alismaiel, O. A., Cifuentes-Faura, J., & Al-Rahmi, W. M. (2022). Online Learning, Mobile Learning, and Social Media Technologies: An Empirical Study on Constructivism Theory during the COVID-19 Pandemic. *Sustainability*, 14(18), 11134. <https://doi.org/10.3390/su141811134>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design Choosing among Five Approaches*. 4th Edition. SAGE Publications, Inc.
- Fauzi, I., & Sastra Khusuma, I. H. (2020). Teachers' Elementary School in Online Learning of COVID-19 Pandemic Conditions. *Jurnal Iqra' : Kajian Ilmu Pendidikan*, 5(1), 58–70. <https://doi.org/10.25217/ji.v5i1.914>
- Kariena, F. F., Dewanti, R., Sulistyaningrum, S. D., Darmahusni, D., & Sumarni, S. (2022). The Benefits and Challenges of English Teachers in Implementing E-Learning during Covid-19 Pandemic. *Jurnal Pendidikan Bahasa Dan Sastra*, 22(1), 37–48. https://doi.org/10.17509/bs_jpbsp.v22i1.47652
- Khosiyono, B. H. C. (2022). Teachers' Experiences of Online Learning at Indonesian Elementary School during the Covid-19 Pandemic. *International Journal of Elementary Education*, 6(1), 127–133.
- Lediana, A., & Ramadan, Z. H. (2022). Difficulties of elementary school teachers in online learning during the Covid-19 pandemic. *Jurnal Pendidikan Dan Pengajaran*, 55(2).
- Muskania, R., & Zulela MS. (2021). Realita Transformasi Digital Pendidikan di Sekolah Dasar Selama Pandemi Covid-19. *JURNAL PENDIDIKAN DASAR NUSANTARA*, 6(2), 155–165. <https://doi.org/10.29407/jpdn.v6i2.15298>
- Nuraini, N., Suhari, S., Awalia, R., Herwani, H., & Ubabuddin, U. (2023). The Creativity of Teachers Using Online Learning Media in Pandemic Covid-19. *Al-Ta Lim Journal*, 30(1), 63–73. <https://doi.org/10.15548/jt.v30i1.737>
- Oktaviani, N., Abidin, F. A., Yuanita, R. A., & Cahyadi, S. (2021). Implementasi Pembelajaran Daring Di Masa Pandemi Covid-19 Berdasarkan Perspektif Guru Sekolah Dasar. *Jurnal Review Pendidikan Dasar : Jurnal Kajian Pendidikan Dan Hasil Penelitian*, 7(2), 86–93. <https://doi.org/10.26740/jrpd.v7n2.p86-93>



-
- Paramahita, K. B. C., Utami, I. G. A. L. P., & Santosa, M. H. (2023). Digital literacy and digital technology in the post-Covid-19 era: Indonesian educators' experiences and opinions. *Jurnal Ilmiah Pendidikan Profesi Guru* , 6(3).
- Pratama, F. R., Santoso, H. B., Junus, K., Michael, J., Mannix, I. A., & Athaya, H. (2025). Constructivism in Online and Hybrid Learning Before and After Covid-19: A Systematic Literature Review. *JURNAL EDUSCIENCE*, 12(4), 1111–1129. <https://doi.org/10.36987/jes.v12i4.7314>
- Putri, W. (2021). E-Learning Pedagogical Challenges of EFL Teachers During Covid-19 Pandemic . *EDUTECH*, 20(1), 87–97. <https://doi.org/10.17509/e.v20i1.30993>
- Rahman, Moh. R. (2025). The correlation of digital literacy competence and learning motivation with social attitudes and self-efficacy in Indonesian teacher candidates following the COVID-19 pandemic. *Dirosat : Journal of Islamic Studies*, 10(1), 1. <https://doi.org/10.28944/dirosat.v10i1.2053>
- Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The Perceptions of Primary School Teachers of Online Learning during the COVID-19 Pandemic Period: A Case Study in Indonesia. *Journal of Ethnic and Cultural Studies*, 90–109. <https://doi.org/10.29333/ejecs/388>
- Ratminingsih, N. M., Made Hery Santosa, Luh Diah Surya Adnyani, & I Ketut Trika Adi Ana. (2022). Online Learning Implementation during the Covid-19 Pandemic: Teachers' Perception and Students' Responses. *JPI (Jurnal Pendidikan Indonesia)*, 11(3), 416–424. <https://doi.org/10.23887/jpiundiksha.v11i3.39562>
- Sosibo, Z. C. (2025). Entrenching academic freedom through constructivist assessment activities during the COVID-19 pandemic. *South African Journal of Higher Education*, 39(4). <https://doi.org/10.20853/39-4-7499>
- Suciati, S. (2020). Improvement of teacher creativities and initiatives through online learning models in the COVID-19 pandemic period. *Ideguru: Jurnal Karya Ilmiah Guru*, 5(1). <https://doi.org/10.51169/ideguru.v5i1.131>